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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,133	03/26/2001	Hisao Suzuki	108075-00054	5889

7590

09/11/2002

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EXAMINER

TRA, ANH QUAN

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 09/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/816,133

Applicant(s)

SUZUKI ET AL.

Examiner

Quan Tra

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 11-35 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-10 is/are allowed.
- 6) ☒ Claim(s) 1 and 36-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \*   c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This office action is in response to the amendment filed 7/25/2002. a new ground of rejection is introduced.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 40-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Asano et al. (USP 4612462).

Asano et al. discloses in figure 2 a level shift circuit comprising : a capacitor (14) ; a charge control circuit (83) connected to the capacitor for providing a voltage of a high potential power supply (VH) to the capacitor and controlling charging of the capacitor; and a limiting circuit (81) connected to the high potential power supply and the charge control circuit for limiting the voltage provided to the capacitor from the high potential power supply before the charge control circuit stops providing the voltage of the high potential power supply to the capacitor.

As to claim 40, figure 2 shows the limiting circuit includes a transistor (81).

As to claim 41, it is seen as an intended use to turn off transistor 81 when limiting the voltage provided to the capacitor depends on the wave form of the input.

As to claim 42, it is inherent that the transistor limits a flow of current from the capacitor to the high potential power supply.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 36-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitt et al. (USP 6130556) in view of Kushiya (USP 5933028).

As to claims 1 and 36, Schmitt et al. shows in figure 3A a level shift circuit comprising: first transistor (MP1) connected to node AN for providing voltage of a high potential power supply (VDD) to the node AN and controlling charging of node AN; and a second transistor (MP2) connected to the high potential power supply and the first transistor for being turned off before the first transistor is turned off. Thus, figure 3A shows all limitations of the claim except for a capacitor coupled to node AN. However, Kushiya's figure 1 shows capacitor (15) coupled to output of level shifter circuit for the purpose of filtering noise. Therefore, it would have been obvious to one having ordinary skill in the art to add a capacitor coupled to the output of Schmitt et al.'s figure 3A for the purpose of filtering noise.

As to claim 37, Schmitt et al.'s figure 3A shows the second transistor is transistor is turned off by a control signal generated on the basis of an input signal (ANA).

As to claim 38, Schmitt et al.'s figure 3A shows the second transistor is turned off when stepping up a voltage of an input signal (inherent).

As to claim 39, the combination of prior art inherent shows that the second transistor limits a flow of current from the capacitor to the high potential power supply.

As to claim 40, figure Schmitt et al.'s figure 3A shows the limiting circuit includes a transistor (MP2).

As to claim 41, it is seen as an intended use to turn off transistor MP2 when limiting the voltage provided to the capacitor depends on the wave form of the input.

As to claim 42, it is inherent that the transistor limits a flow of current from the capacitor to the high potential power supply.

***Response to Arguments***

5. Applicant's arguments have been fully considered but they are not persuasive. Applicant states that "The present invention is directed to... That is, the limiting circuit turned off before the charge control circuit is turned off" (page 4, second paragraph). The Examiner respectfully disagrees. It is not necessary for the limiting circuit to be turned off before the charge control circuit to meet the recitation "the limiting circuit limits the voltage provided to a capacitor from the high potential power supply before the charge control circuit stops providing the voltage of the high potential power supply to the capacitor". As broad as reasonable interpretation, the recitation is understood as before the charge control circuit is turned off, the limiting circuit has already limited the voltage to the capacitor. Asano's figure 2 shows transistor 81 has limited VH to capacitor 14 before transistor 83 is turned off. Therefore, Asano's figure 2 meets all limitations of the claim.

***Allowable Subject Matter***

6. Claims 2-10 are allowed.

*Conclusion*

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These references are cited as interest because they show some circuits analogous to the claimed invention.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quan Tra whose telephone number is 703-308-6174. The examiner can normally be reached on 8:00 A.M.-5:00 P.M..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 703-308-4876. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



QT  
September 5, 2002



Terry D. Cunningham  
Primary Examiner